

# Private Cost of Education: A Comparative Study of Distance and Campus-based University Students in Nigeria

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## Abstract

This paper examines the comparative private costs of distance and conventional (classroom-based) university students in Nigeria. A total of 200 subjects comprising students registered for the B.Sc. Computer Science and B.A. English Studies programmes at the University of Lagos, Nigeria and the National Open University of Nigeria (NOUN) were randomly selected as samples for this study. Structured oral interview was also used to collect information from tutors and facilitators as well as counsellors at the NOUN study centres. Two hypotheses were drawn from the statement of the problem using simple percentage statistical analysis to determine whether or not there are private costs borne by higher education students in Nigeria. The study sought to establish which of the two modes of education demands a higher or lesser private investment from students in participating in higher education. Findings reveal that significant private costs learners generally incur both at the pre-entry as well as during the course of their studies for higher education in Nigeria generally. It was also found that the private costs for students studying through education via the distance learning mode (like NOUN) were significantly lower than those involved in pursuing university education via the conventional education mode such as the University of Lagos. The paper concludes by advocating for greater emphasis on open and distance learning methods for university education and training in Nigeria and other developing countries. It also recommends that funding agencies and scholarship granting organizations would reach a larger number of interested grantees by exploring the distance learning approach, whose costs are generally lower and which requires a much lower private contribution from learners.

**Keywords:** Educational cost, private cost in distance education, comparison of distance learning and campus learning, distance education in Nigeria

## Introduction

Considerable amount of research studies conducted in the past on education and earnings has established a positive correlation between the level of education and the earnings which accrue to individuals and society. This relationship, has been the subject of numerous social and economic debates, usually explained using the 'human capital theory'. The human capital theory derives from a person's or group's productive capacity. Accordingly, labour economists assumed that the level of an individual's earnings is determined by the individual's stock of human capital. The factors that determine the development of human capital include: education, health care, on-the-job training, non-formal education, extension programmes, as well as quality social services relating to water supply, environmental protection, improved technical education and migration of workers. Educational planners and economists of education also postulate that these stocks of human capital may be increased and improved through adequate and appropriate investments in education, training and/or health care (Umo, 2002; Adedeji and Bamidele, 2002; Aigbokhan, Imahe and Ailemen, 2007).

Given these realities, it is assumed that economic benefits derived from education are futuristic in nature, that is, benefits are acquired after successful completion of education and training. Additionally, one may also assume that the benefit that accrues to the individual will be contingent on the level and/or depth of training and education that is experienced. Thus, it may be inferred that returns on educational investment that accrue to a fresh school-leaver will be less than that of a university graduate. However Friedman and Friedman (1980) state that "there was no evidence that higher education yields 'social benefits' over and above the benefits that accrue to the students themselves", and evidence provided by Bloom, Canning and Chan (2005) suggests that higher education is both a result and a determinant of income, and can produce public and private benefits far above the preceding years of schooling. In the same vein, Aigbokhan, et al. (2007) attributed the development of specialized human capital in Nigeria to tertiary education. The Nigerian economic sector relies on the universities and other tertiary education institutions for provision of skilled manpower to operationalise the entrepreneurial and labour components of its industrial production processes.

There are currently 117 universities in Nigeria, being the highest number in sub-Saharan Africa (National Universities Commission, 2011). However, the universities are experiencing daunting pressures to increase

access to more despite weakening quality and limited funding and budgetary allocations. This is both a cause and consequence of the decline in the impact of universities on human capital development and the national economy (Dabalén, Oni and Bankole, 2001; Aigbokhan, et al, 2007).

Conventional institutions are hard pressed to meet the demands of those seeking admission places and only about 15 per cent of qualified candidates could be admitted. Ipaye (2007) revealed that "from 2001 to 2006, the highest that the universities in Nigeria have been able to admit between them was 12% of the total number of applicants." An analysis of application and admission into Nigerian universities showed that some departments could not admit more than 6 per cent of the total number of applicants. Thus, distance learning was identified as an alternative approach. This is based on the notion that the approach permits a flexible, technology-enhanced and self-paced learning mode. Additionally, there is a perception of economic advantage in distance learning as being less expensive than campus-based education (Hulsmann 2000). However, there is currently no empirical basis for assuming that distance education in Nigeria is cheaper than conventional system, especially in terms of private costs borne by each learner. If the growing popularity of open and distance learning system is to be sustained, there must be evidence to support claims of its cost efficiency and cost effectiveness. Analysts have argued against the continued expansion of the higher education enrolment in Nigeria (Ajayi, Adeniji and Adu 2008) based on the notion that the labour market is restricted and most of the university graduates are not being absorbed into gainful employment. Though, there is some logic in this, it contradicts the Nigerian National policy on education which states that "maximum efforts will be made to enable those who can benefit from higher education to be given access to it." This policy provision draws attention to the issue of whether universities are designed to train people for jobs or to provide specialised knowledge that would empower people. This has been a perennial debate among higher education scholars. However Akpan and Akinyoade (2008) argue that the role of higher education in a developing country like Nigeria is that it guarantees social justice for the marginalised and disadvantaged people. Access to higher education is means of empowering people from lower socio-economic class and marginal demographic profiles that are traditionally underrepresented in education, such as women, disabled people and ethnic minority groups.

One of the key objectives of distance education is that it seeks to widen access to higher education for all members of society, as a means of providing them with 'voice' in society. Given the limitations of conventional education, which has lost momentum and could not expand much further to cater for the underprivileged groups, the distance learning option seems realistic. In this paper the cost issues associated with provision of distance higher education are examined in comparison with conventional education, especially those that are associated with the private costs of learners.

### **Cost efficiency and cost effectiveness of distance education**

Both cost efficiency and cost effectiveness analyses have become less popular in educational studies, especially in the field of distance education, probably because it is considered an already established case. However, many providers of distance learning programmes do not know what their programmes cost, especially from the point of view of the learners. The justification is to provide a comparison of the costs of distance learning and conventional education approaches, based on the learners' perspective and experience. Though, Educational costs are divided into social, private and psychic costs, there is a need to estimate the proportion of the private costs of the two approaches, in order to determine the comparative cost effectiveness. This study aims to contribute to the growing literature on educational costs analysis and economics of distance education in Nigeria, by offering new rationale for the adoption of the distance learning by prospective university students.

With increasing budgetary constraints to provision of education, a delivery system that is cost effective is needed. Distance education programmes, when properly planned and executed, are cost effective to both the nation and the student (Jegede, 2004). However, development of distance learning programmes are often accompanied by huge initial capital outlay on things such as warehousing, information and communication technology infrastructures, recruitment and training of staff, design and development of instructional materials, and hiring of part-time staff. Despite the high level of initial fixed costs, distance learning can achieve economies of scale and average costs that are lower than traditional educational institutions. These average costs are usually measured in terms of students (usually the cost per full-time equivalent student), courses, student hours, and graduates (Rumble, 2002).

### **Private costs of distance and conventional education**

Institutional costs refer to those costs that are borne by the institution and/or the government, in order to ensure effective provision of instruction to learners. Whereas, private costs including household costs, are paid by students to access and participate in distance learning. This may include registration or tuition fees, examination fees, costs of tutorial sessions (if any), the transportation to and from the learning centre (for tutorials and other administrative activities). This also includes costs of practicals and replacement supplies (Belawati, 2006; Mbua 2007) also identified some other private costs that learners bear in the course of their studies, these include caution deposits and cost of uniforms for certain learners. Returning students also have to pay administrative charges for re-registration each new semester at the National Open University of Nigeria. Additionally there are costs of internet connectivity personally or via commercial cyber cafes.

Learners also bear indirect costs referred to as opportunity costs. These are estimated income that could

have been earned by students if they have worked full time. Students' opportunity costs may include time devoted to studying which otherwise could have been spent for leisure or with the family. The concept of opportunity costs is important since it represents the real cost of education (Tsang, 1988), and monetary price does not always reflect the true economic value of a resource of education (Jamison, Klees & Wells, 1978). The debate on the value of opportunity costs is unresolved, however if we consider the fact that learners can spend monies currently being invested as private costs in distance learning on other things, then opportunity cost may imply the value that a resource would have in its best alternative use.

Laidlaw and Layards (1974) had considered the implications of the fact that the OU students are home-based. This means, or is generally thought to mean, that their study time displaces leisure time, whereas the study time of campus students displaces working time. Assuming that the study time is the same for both types of students, which is the costlier? It is an extreme materialist notion that no cost is involved in the reduction of leisure. However, many students may prefer study to their alternative leisure activities. If distance learners are indifferent to study and leisure and campus-based learners indifferent to study and work, then a campus student course would have additional differential cost equal to the foregone work output of the campus student. However, in the present study, opportunity cost has not been considered due to lack of stable and sustained stand on it by educational economists.

Analysts of cost studies in the field of distance education have been preoccupied with how favourably it compares with the campus-based delivery of education (Wagner, 1972, 1973; Laidlaw & Layard, 1974; Hulsmann, 2000; Rumble, 2001; Belawati, 2006). In doing this, analysts seem to have overlooked the goals of the two modes and how differentiated they are. Distance education is concerned with expanding access to learners and fostering lifelong learning opportunities for non-traditional groups of learners. The acquisition of degrees, diplomas and other certificated awards is only one of the objectives of distance learning. It seeks to provide a framework for equality and social emancipation by widening participation in educational opportunities. Though sometimes is high incidence of high level of dropout, compared with campus-based approach, however the number of non-traditional learners served by distance education is likely to be higher than campus-based institutions. Distance learning has been used with great success to provide access to education for prisoners in Nigeria. Also, special training programmes have been designed for other special learner-groups such as women in purdah, nomadic learners etc. (Olakulehin and Ojo, 2006). Thus, distance education adds greater value in terms of personal and social benefits to diverse groups than campus-based institutions can offer.

Regrettably, measures of costs based on units of education achieved other than degrees and on concepts of "added-value" are not yet popular. This leaves only less satisfactory measures such as cost per registered full-time equivalent year of study. Such calculations favour distance education institutions because lower course pass rates are not brought into the equation. Early studies of the UK Open University (OU) indicated that it produced graduates at about half the costs of other universities (ADEA, 2002). A study undertaken by the Department of Education and Science in 1981 found that a three year full-time equivalent (FTE) degree at the OU cost GBP 4, 890 compared to an average of GBP 8, 550 in other universities. A four year FTE degree costs GBP 7, 984 at the OU and GBP 11, 842 elsewhere. The differences were even greater when calculated in terms of public fund costs (GBP 4,356 compared to GBP 10, 801 for a three-year FTE degree) and total economic costs (GBP 7,116 compared to GBP 17, 843) (Department of Education, 1981). The differentials have narrowed somewhat since 1981 because the proportion of under-qualified students entering the OU has increased and unit costs in other universities have fallen. Traditionally cost of an OU graduate is less than two-thirds that of a full-time graduate in other universities (Horlock, 1984).

A confidential study undertaken by the Department for Education and Science in 1991, compared cost of OU degrees with part-time degrees offered by three conventional institutions. It found that a three-year FTE degree at the open university costs less than 60 per cent of the average of the other universities. These are impressive statistics, but they are not unique. Other distance teaching universities with similar teaching systems achieve similar rates. For example, the Allama Iqbal Open University in Pakistan, which is modelled after the OU, achieves costs per graduate that are 45 to 70 per cent of the cost of conventional universities (Perraton, 1994). Additionally, the Hong Kong Open university made extensive use of existing distance teaching materials from OU and elsewhere and combined these with highly resourced student support arrangements when it turned up. As a break-even institution, it was required to charge students the full cost of their courses. Its graduates paid about one-third of what a similar degree of the University of Hong Kong cost at the time (Swift & Dhanarajan, 1992). There are currently very little literature on costs of distance education and open learning in Sub-Saharan Africa. Thus, it is difficult to cite here cases of African experiences with comparative studies of distance and conventional university education. However, the National Open University of Nigeria also made use of existing resources from several other institutions around the world at inception. Despite that NOUN charges fees, the federal government also subsidizes the university by making regular budgetary allocations for capital expenditure and personnel costs. While the recurrent expenditure are covered by fees paid students and other internally generated revenue strategies.

## Research Questions

Though distance learning is commonly regarded as generally cost effective and more economical approach to training and education, however, there is no empirical basis for stating that distance learning in Nigeria is comparatively cheaper than conventional education method. This apparent gap in research literature

makes it difficult for prospective learners and/or funding agencies and organisations to determine the cost effectiveness or otherwise of distance learning system.

This paper seeks to investigate and compare the private costs of distance and conventional university education in Nigeria with a view to determining which is more cost efficient. Case studies of the National Open University of Nigeria (NOUN) and the University of Lagos (UNILAG) are considered in this exercise.

To address the objectives set out above, the following research questions are identified :

- a. What are the various private costs borne by students in the open and distance learning system and the conventional university system in Nigeria?
- b. Which of the approaches is more cost efficient in terms of private costs borne by the learners?

## Methodology

### Research design

Using the descriptive survey method, a combination of quantitative (questionnaire) and qualitative (interview) data collection and analytical techniques were used for this study with the aim of detailing the comparative cost effectiveness of private costs of conventional and distance learning university students in Nigeria.

### Population and sample

All the students registered in the year 2007 for two bachelors degree programmes of the two institutions - National Open University of Nigeria and the University of Lagos, - constituted the population for the study. Using a stratified sampling technique, 200 students (100 from each institution) were randomly selected as samples. The two institutions represented the progressive nature of higher education in Nigeria - UNILAG as the largest dual-mode university and NOUN as the only open university in the country.

At the second stage, the programmes on offer by the two institutions were identified, in order to determine similarity in the list of programmes offered by the institutions. This was done by an analysis of the student handbooks and programme brochures of the two institutions. Two programmes B.A. English Language Studies and B.Sc. Computer Science were selected for the purpose of this study. These are the most popular programmes in the two institutions, having high enrolment rates.

Given that the National Open University of Nigeria is yet to graduate its first cohort of students, the researchers decided to administer the research instrument on only the second year students of the two institutions. It was considered that, at this level, they had completed at least a full session of academic activities in their respective institutions under the selected programmes.

Data from the academic registry division of the University of Lagos revealed that there were 486 and 529 students registered for both B.Sc. Computer Science and B.A. English Studies respectively. While data from the National Open university of Nigeria indicated that 492 and 517 students were registered from both B.Sc. Computer Science and B.A. English Language respectively. Adequate and representative samples – modified to a 10% round-off figure per group -were selected for the two programmes under each institution. In order to ensure that the selected samples are from a relatively similar socio-economic environment, the NOUN student samples were selected specifically from the Lagos Study Centre, in which over 55% of registered students of the university are located. Thus, 50 students per programme per institution led to a total sample of 200 students.

### Tools used

The Private-Costs of University Students Rating Scale (P-CURS), an adaptation of a questionnaire developed by Gaba, Panda and Murthy (2007) at the Staff Training and Research Institute of Distance Education (STRIDE), Indira Gandhi National Open University is used to collect data for this study. The instrument is a structured questionnaire which sought the opinions and perceptions of students regarding the costs that they bear in pursuance of their programmes. For the NOUN students, the instrument was administered at the Lagos study centre during the registration exercise for the new semester, while the instrument was administered on the UNILAG students just before the commencement of their class lectures. The questionnaires were collected immediately on completion.

## Analysis and Results

Two hundred completed questionnaires were analysed by using simple statistics, i.e. percentage analysis for each of the questions. The results are given in the following tables and subsequent interpretations.

### Characteristics of respondents

The characteristics of the respondents sampled for this study are presented in Tables 1.

**Table 1.** Biographical characteristics of respondents

VARIABLE		UNILAG (N=100)	NOUN (N=100)
<b>Gender</b>	Male (129)	68	61
	Female (71)	32	39
<b>Age</b>	21-30	73	45
	31-40	27	41
	41-50	-	12
	51-60	-	2
	Above 60 years	-	-
<b>Marital status</b>	Single	92	67
	Married	5	29
	Separated	-	-
	Divorced	-	1
	Widowed	-	2
<b>Employment status</b>	Student	85	34
	Employed	4	42
	Unemployed	6	11
	Self-employed	5	13
<b>Qualification before current registration</b>	SSCE/GCE	79	61
	NCE/ND	8	17
	HND/ B.Sc.	2	19
	M.Sc.	-	3

Analysis of the biographical information provided by the respondents indicated that the sample comprised 129 males and 71 females. Among those, 59 percent were between the 21-30 years age-range, while 34 percent were between the 31-40 years age-range and the remaining 7 percent, (who were essentially NOUN students) were within the 41-60 years age-range. In addition, about 80% of the respondents were single, while 17 percent were married, and 3 respondents only had indicated that they were either divorced or widowed (and, four respondents had not indicated their status). About 60 percent respondents were full time students, while 22 percent indicated that they were employed, and 9 percent each respectively indicated that they are either unemployed or self-employed. Finally, 70 percent of the respondents had only the Senior Secondary School Certificate (SSCE) or General Certificate Examination (GCE) before enrolling for their current programme, while about 13 percent held either the National Certificate of Education (NCE) or the National Diploma and about 10 percent respondents already possessed Higher National Diplomas or the bachelors degree before enrolling for the current programme. Only 3 respondents from NOUN already held Master's degree before registering for the current programme.

### Income

The responses provided by the sample respondents for each cluster of samples-

UNILAG and NOUN- are provided in Tables 2a, 2b, 2c (UNILAG) and Tables 3a, 3b, 3c (NOUN).

*i) UNILAG*

**Table 2a.** Residential information

S/N	Item	Yes	No
1	Are you resident in the University hostel or any other privately owned Hostel?	82	18
2	Are you staying with your nuclear family or some other relative?	18	82
Total		100	100

**Table 2b.** Average personal income (monthly)

Income range	Number of Respondents
(a) < N3500	6
(b) N 3501- 7000	62
(c) N 7001-10000	16
(d) N 10001-15000	13
(e) N 15001- N 20000	3
(f) > N 20000	6
<b>Total</b>	<b>100</b>

**Table 2c.** Average household income (monthly)

Income range	Number of Respondents
a) N 15000 – 25,000	12
b) N 25001- 45, 000	19
c) N 45001- 55000	23
d) N 55001-75000	32
e) N 75001- 100000	11
f) > N 100,000	9
<b>Total</b>	<b>100</b>

*ii) NOUN*

**Table 3a.** Residential information

S/N	Item	Yes	No
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1	Are you resident in the University hostel or any other privately owned Hostel?	8	92
2	Are you staying with your nuclear family or some other relative?	92	8
<b>Total</b>		<b>100</b>	<b>100</b>

**Table 3b.** Average personal income (monthly)

Income range	Number of Respondents
(a) < N3500	0
(b) N 3501- 7000	11
(c) N 7001-10000	9
(d) N 10001-15000	9
(e) N 15001- N 20000	4
(f) > N 20000	67
<b>Total</b>	<b>100</b>

**Table 3c.** Average household income (monthly)

Income range	Number of Respondents
a) N 15000 – 25,000	16
b) N 25001- 45, 000	21
c) N 45001- 55000	14
d) N 55001-75000	38
e) N 75001- 100000	6
f) > N 100,000	5
<b>Total</b>	<b>100</b>

### Information on private costs

**Table 4.** Average private expenditure related to studying (Figures in Naira; 1US\$ = N158)

Items	UNILAG	NOUN
<b>Pre-entry stage</b>	N	N
a) Prospectus	3,650	2500
b) Registration fee	15,000	5000
c) Transportation	3500	3000

d) Counselling	-	2000
e) News paper	-	-
f) Telephone	1500	2000
g) Caution deposit	20,000	7,500
h) Fax (hire)	-	-
i) Web/Emails (hire)	5000	5000
<b>Total</b>	<b>48,650</b>	<b>25,000</b>
<b>Entry stage (while studying)</b>		
a) Purchased additional books for the course	25,000	10,000
b) Private coaching	10,000	5,000
c) Viewing audio/video/CDs	-	2000
d) Purchased audio/video/CDs	5,000	5,000
e) Stationery items	10,000	6,000
f) Expenditure on attending teleconferencing	-	2,000
g) Attending counselling sessions	-	2,500
h) Expenditure on submission of assignments	12,000	8,000
i) Expenditure on collection of corrected assignments	-	2000
j) Project preparation	4000	-
k) Expenditure on library reference	-	2000
l) Expenditure on practical sessions	15,000	10000
m) Telephone	2000	2,500
n) Fax (hire)	-	-
o) Web/Email (hire)	2000	2,500
p) Submission of examination form	-	-
q) Examination fees	20000	12,000
r) Transportation	2000	5000
s) Professional fees	-	-
<b>Total</b>	<b>107,000</b>	<b>76,500</b>

It is generally argued that university students whether they are engaged in studying through the conventional approach or through distance learning tend to bear a significant proportion of expenditure associated with their studies. Judging from Table 4, it will be observed that the students under the two

educational approaches bear a number of expenditures that are not institutional, yet they are related to the academic of the learners.

The responses from the samples as provided in Table 6 indicate that on the average, students spend on a number of items even at the point of indicating their interest in registering for the programmes. There spending heads include: prospectus and application fees, registration, transportation, counselling (information search), telephone, caution deposit, internet connectivity etc. The results also show that on the average, students of the university of Lagos spend up to N48, 650 on these pre-entry stage activities; while students of the National Open University of Nigeria spend an average of N25, 000 on pre-entry activities such as calls, purchase of forms, transportation, counselling etc. Furthermore, N107, 000 was spent on the average by students of the University of Lagos after their acceptance into the programmes; while students of the National Open University of Nigeria spend about N76,500 on their studies after registration activities.

### Pre-entry stage

**Table 4a.** Average private expenditure related to studying pre-entry stage

Items	UNILAG	%	NOUN	%
<b>Pre Entry Stage</b>	N		N	
a) Prospectus	3,650	8	2500	10
b) Registration fee	15,000	31	5000	20
c) Transportation	3500	7	3000	12
d) Counselling	-		2000	8
e) News paper	-		-	
f) Telephone	1500	3	2000	8
g) Caution deposit	20,000	41	7,500	30
h) Fax (hire)	-		-	
i) Web/Emails (hire)	5000	10	5000	20
<b>Total</b>	<b>48,650</b>	<b>100</b>	<b>25,000</b>	<b>100</b>

Table 4a shows that students of the two universities spend between 8-10 per cent of their pre-entry expenditure on acquiring the prospectus of the institutions, while the cost of registration at the University of Lagos is 31 per cent of the pre-entry costs. This is quite high compared with the amount paid by NOUN students for the same activity which is just 20 per cent of the pre-entry stage activities. One fact that also emerges glaringly from the table is that the NOUN students bear a higher cost of communication with the institution than the students of the University of Lagos. This is seen in the figures for telephone and web/emails; where the cost of internet access for UNILAG students is eight per cent of the total fees paid at this stage and that of NOUN is 20 per cent of the fees paid at the same stage.

### Entry-stage (while studying)

**Table 4b.** Average private expenditure related to studying entry stage

<i>Entry stage (while studying)</i>	N (UNILAG)	%	N (NOUN)	%
a) Purchased additional books for the course	25,000	23.4	10,000	13
b) Private coaching	10,000	9	5,000	7
c) Viewing audio/video/CDs	-		2000	2

d) Purchased audio/video/CDs	5,000	4.5	5,000	7
e) Stationery items	10,000	9	6,000	8
f) Expenditure on attending teleconferencing	-		2,000	2
g) Attending counselling sessions	-		2,500	3
h) Expenditure on submission of assignments	12,000	11	8,000	10
i) Expenditure on collection of corrected assignments	-		2000	2
j) Project preparation	4000	4	-	
k) Expenditure on library reference	-		2000	2
l) Expenditure on practical sessions	15,000	14	10000	13
m) Telephone	2000	2	2,500	3
n) Fax (hire)	-		-	
o) Web/Email (hire)	2000	2	2,500	3
p) Submission of examination form	-		-	
q) Examination fees	20000	18	12,000	16
r) Transportation	2000	2	5000	7
s) Professional fees	-		-	
<b>Total</b>	<b>107,000</b>	<b>100</b>	<b>76,500</b>	<b>100</b>

Table 4b presents the analysis of the students' expenditure on their programmes after they had secured admission into the programmes. Comparisons of the various expenditure heads reveals there are a number of private costs involved in pursuing the programmes even after they had gained admission into the institutions. This is even more so for distance learners who could not avoid the costs associated with certain expenditure heads such as communication and travelling to the study centres etc.

Further, it is generally presumed that the private costs associated with learning through the distance learning system are significantly lower than those associated with studying through the conventional education system. The intent of this is to provide empirical information to founders of higher education in Africa, who show a great deal of reluctance because they are not aware that they could fund higher education for a larger number of people more effectively if they encourage them to access the open and distance learning system. While education sponsors show a great deal of concern regarding the sponsoring university students because the bursaries and scholarships never seem to be sufficient, it is possible to significantly reduce the shortfall associated with this.

As can be gleaned from the data in Table 6 (?) above, the average learner enrolled for bachelors programmes in computer science or English studies at the University of Lagos is likely to spend about N156, 000 by the time he has completed the first year of the programme; while at the National Open University of Nigeria, a student enrolled for the same programme would spend about N101,000 by the end of the first year.

## Discussion and Conclusions

The results of the study corroborate the findings of earlier researchers (Hulsmann, 1997; Perraton, 2000, 2003; Psacharopoulos, 1978) on the issue of private costs of education - that students who are engaged in educational activities also bear a significant proportion of the expenditure associated with their studies. Though, in most developing countries, provision of higher education tends to be state funded, however, there is a neglected aspect of this funding. This includes costs of enquiries, application, transportation etc., all of which add up to the total cost of education (Belawati, 2006). It is interesting to note that many

educational planners and policy makers tend to ignore this crucial aspect of educational access and equity. Even if the higher education system is completely free of tuition (which it is not), there are still some costs that the institution cannot easily bear for the learners, especially those associated with commuting to and from the learning centres in the case of distance teaching institutions. In many cases students are required to pay stipends for accommodation as in the case of conventional learners. Due to income differentials, it is realistic to assume that none of these costs are significant. Thus, as the above analysis suggests, students of both conventional and distance learning institutions bear significant private costs associated with their learning, apart from the institutional (social) costs which are borne by the government.

Perhaps due to the fact that distance learners do not have to pay for so much extra tutorials and accommodation, their private costs tend to be lower than those of conventional students. Also the findings of Perraton (2000) and Belawati (2006) on the same issue proves that distance education is a much cheaper means of human resource development. This justifies the existence of the distance education institutions and, given the low ratio of marginal average costs, its expansion. In organizing only distance learning institution it has been generally found that the more students are enrolled for the programmes of the institution the less expensive it becomes to operate. There is allowance for students to register for only the number of courses he or she can handle at a given point in time. This has serious pedagogical implications in the sense that it allows the student to study qualitatively without the intervening psychological factors caused by socio-economic inadequacies or obligations to the institution – a fact that can affect students' academic performance. In essence, the opportunity to self-pace their studies and also make payment in affordable tranches offered by distance learning would enable learners to concentrate on their studies better. They do not need to excise concern about how to raise funds to complete their tuition fees or lose their studentship, since they will only need to pay for the courseware that they can afford at a given time.

The findings of the present study indicated that there were significant costs borne privately by learners in both the conventional and the distance learning systems. It was also found that the distance learning system is significantly more cost efficient than the conventional learning system, in terms of private costs of borne by the learners. To sum up, the cost evidence indicates that students and/or their parents expend a significant volume of money on the acquisition of higher education. This is different from the proportion borne by the student and or the state which is usually recorded by costs analysts. This study has attempted to crystallize the study of cost analysis of distance education with particular emphasis on the impact of private costs. In many cases, most providers of distance education are not aware of the actual total cost of their programmes in terms of including the private expenditure. This study has helped to provide a more lucid explanation of the cost implications of education at the university for would-be scholarship agencies and bursary awarding organizations such as state governments and local governments.

Given the centrality of distance education in the whole educational architecture in Nigeria, it is recommended that a practical approach should be adopted in crafting educational policies in Nigeria. The potentials of the open and distance learning methods in further development of the Nigeria human resource both for pre-service and in-service education should be seriously considered with view to centralising ODL as part of all human capacity development activities in the country.

It is also suggested that every distance education institution in Nigeria and other developing world should attempt to do a unit cost analysis of their programmes including a component on private costs of distance learners. This would guide them in further programme evaluation activities which are designed to assess the effectiveness of the learners that enrolled for their programmes.

Open of the recommendations that has also emanated from this study is that scholarship agencies and funding organizations should explore the open and distance learning system more so that can eliminate other costs that are not usually accounted for within their funding budget. From the analysis in this study, it was found that private costs of distance learner tend to be significantly lower than those of conventional students thus an agency that provides funding for learner through the distance learning method will expose the recipients of their awards to less private expenditure than if they had enrolled in the conventional university system.

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